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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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**In re application of:** Hodges, *et al.*

**Group Art Unit:** 2451

**Application No.:** 10/720,941

**Examiner:** Tran

**Filed:** November 24, 2003

**Attorney Docket:** 030006

**Title:** "Methods for Providing Communications Services"

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**37 C.F.R. § 1.8 CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being transmitted via facsimile to the USPTO centralized facsimile telephone number (571) 273-8300.

Scott P. Zimmerman

Name of Person Transmitting This Paper

A handwritten signature in black ink, appearing to read "Scott P. Zimmerman", is written over a faint, larger, stylized signature.

December 11, 2009

Date of Transmission

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**PETITION FOR EXTENSION OF TIME**

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Commissioner:

The Assignee respectfully requests an extension of time in which to file this appeal. The Assignee respectfully petitions the Commissioner for a five month extension of time from July 17, 2009 to December 17, 2009. The large entity fee was electronically paid at submission..

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**APPELLANT'S BRIEF IN SUPPORT OF APPEAL**

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Mail Stop: Appeal Brief — Patents  
Commissioner for Patents

The Assignee/Appellant hereby submits a Brief in Support of Appeal for the above-identified application. The 37 C.F.R. § 41.20 (b) (2) large entity fee was electronically paid at submission.

A Notice of Appeal was filed March 21, 2008, along with a Pre-Appeal Brief Request for Review. The Panel decision was mailed June 19, 2009, and the Panel recommended proceeding to the BPAL.

If any questions arise, the Office is requested to contact the undersigned at (919) 469-2629 or [scott@scottzimmerman.com](mailto:scott@scottzimmerman.com).

Respectfully submitted,



Scott P. Zimmerman  
Attorney for Appellant, Reg. No. 41,390

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**REAL PARTY IN INTEREST**

The real party in interest is AT&T Intellectual Property I LP, as the Assignee of U.S. Patent Application 10/720,941, as evidenced by an assignment recorded at reel/frame 014746/0465.

**RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences pertaining to the above-identified application.

**STATUS OF CLAIMS**

Claims 1-20 are pending in this application.

Claims 1, 3, 19, and 20 are independent claims.

Claims 1-20 were finally rejected under 35 U.S.C. § 103 (a) as being obvious over U.S. Patent Application Publication 2006/0041679 to Feig in view of U.S. Patent Application Publication 2005/0094725 to Hui and further in view of U.S. Patent Application Publication 2004/0267686 to Chayes, *et al.*

The Appellant appeals the final rejection of claims 1-20.

### **STATUS OF AMENDMENTS**

The claims hereby Appealed are based on an Amendment that was filed on September 10, 2007.

A final Office action was then mailed November 27, 2007. A request for reconsideration was then submitted January 25, 2008. An Advisory Action was mailed February 28, 2008.

A Notice of Appeal was filed March 21, 2008, along with a Pre-Appeal Brief Request for Review.

The Panel decision was mailed June 19, 2009, and the Panel recommended proceeding to the BPAL.

### **SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed subject matter generally relates to communications. When a client device requests electronic data, often times the electronic data must be manipulated for presentation at the client device. That is, the electronic data must be changed, formatted, or altered to suit the display characteristics, processing abilities, and/or storage capabilities of the client device. A handheld personal data assistant, for example, often requires that bandwidth-intensive electronic data, such as on-demand video, be scaled, color corrected, and/or otherwise manipulated for optimum presentation on the small display of the handheld personal data assistant. Heretofore,

however, manipulation of electronic data was usually the responsibility of the client device — that is, the client device manipulates the incoming electronic data for presentation.

The claimed subject matter, though, manipulates the electronic data for the client device. Exemplary embodiments describe a communications service that formats electronic data to the capabilities of the client device. The electronic data is manipulated by a server in a communications network, so the client device is relieved of this burden. The server segments the electronic data according to various schemes. The individual segments are routed to other devices and to other software transformation modules, within and without the communications network, for subsequent processing. When the subsequent processing is complete, the server aggregates the results and then communicates the aggregated results along the communications network. When the client device receives the aggregated results, the client device may then view/execute/present the aggregated results with little or no regard for the original format of the electronic data. That is, the aggregated results have already been substantially formatted, transformed, processed, and/or manipulated to suit the processing, storage, and/or audio/display requirements of the client device.

**A) Independent Claim 1**

In accordance with an exemplary embodiment, independent claim 1 recites a method of providing communications services, comprising:

- receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;
- recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;
- dispersing the segments via a network for subsequent processing services;
- receiving results of the processing services;
- aggregating the results of the processing services into a second data stream; and
- communicating the second data stream via the network.

Textual support for independent claim 1 is also provided. The first data stream, comprising packets of data, is described at least at paragraphs [0015] and [0023]. The recursive segmentation of the first data stream is described at least by paragraph [0013] of U.S. Application No. 10/720,949, which is incorporated by reference. The dispersing of the segments for subsequent processing services is described at least at paragraphs [0014] and [0023]. The received results of the processing services is described at least at paragraph [0024]. The aggregated results and the second data stream are also described at least at paragraph [0024]. The communication of the second data stream is also described at least at paragraph [0024].

**B) Independent Claim 3**

In accordance with another exemplary embodiment, independent claim 3 recites a method of providing communications services, comprising:

- receiving data at a computer, the data received as packets of data packetized according to a packet protocol;
- segmenting the packets of data into segments according to a segmentation profile stored in memory;
- dispersing at least one of the segments via a network for a subsequent processing service;
- receiving results of the subsequent processing service;
- aggregating the results of the subsequent processing service; and
- communicating the aggregated results to a client communications device, wherein the aggregated results are formatted according to the segmentation profile.

Textual support for independent claim 3 is also provided. The received data is described at least at paragraphs [0016] and [0023]. The recursive segmentation of the is described at least by paragraph [0013] of U.S. Application No. 10/720,949, which is incorporated by reference. The dispersing of the segments for subsequent processing services is described at least at

paragraphs [0014] and [0023]. The received results of the processing services is described at least at paragraph [0024]. The aggregated results is also described at least at paragraph [0024]. The communication of the aggregated results is also described at least at paragraph [0024].

**C) Independent Claim 19**

In accordance with another exemplary embodiment, independent claim 19 recites a system, comprising:

means for receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

means for recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

means for dispersing the segments via a network for subsequent processing services;

means for receiving results of the processing services;

means for aggregating the results of the processing services into a second data stream; and

means for communicating the second data stream via the network.

Textual support for independent claim 19 is also provided. The structure supporting the means plus function language is described at least as a processor, memory, a computer, a server, and/or a communications switch, as explained by at least paragraphs [0023] and [0026] - [0033]. The first data stream, comprising packets of data, is described at least at paragraphs [0015] and [0023]. The recursive segmentation of the first data stream is described at least by paragraph [0013] of U.S. Application No. 10/720,949, which is incorporated by reference. The dispersing of the segments for subsequent processing services is described at least at paragraphs [0014] and [0023]. The received results of the processing services is described at least at paragraph [0024]. The aggregated results and the second data stream are also described at least at paragraph [0024]. The communication of the second data stream is also described at least at paragraph [0024].

**D) Independent Claim 20**

In accordance with another exemplary embodiment, independent claim 20 recites a computer program product comprising processor executable instructions for performing a method, the method comprising:

receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

dispersing the segments via a network for subsequent processing services;

receiving results of the processing services;

aggregating the results of the processing services into a second data stream; and

communicating the second data stream via the network.

Textual support for independent claim 20 is also provided. The computer program product is described at least at paragraphs [0018, [0023], and [0055]. The first data stream, comprising packets of data, is described at least at paragraphs [0015] and [0023]. The recursive segmentation of the first data stream is described at least by paragraph [0013] of U.S. Application No. 10/720,949, which is incorporated by reference. The dispersing of the segments for subsequent processing services is described at least at paragraphs [0014] and [0023]. The received results of the processing services is described at least at paragraph [0024]. The aggregated results and the second data stream are also described at least at paragraph [0024]. The communication of the second data stream is also described at least at paragraph [0024].

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The Appellant appeals the final rejection of claims 1-20 under 35 U.S.C. § 103 (a) as allegedly being obvious over U.S. Patent Application Publication 2006/0041679 to Feig in view



of U.S. Patent Application Publication 2005/0094725 to Hui and further in view of U.S. Patent Application Publication 2004/0267686 to Chayes, *et al.*

## **ARGUMENTS**

### **I. *Feig* with *Chayes* Teaches Away by Requiring Impermissible Changes**

The proposed combination of *Feig* with *Chayes* teaches away and cannot support a *prima facie* case for obviousness. The M.P.E.P. expressly explains several situations in which a reference “teaches away,” including when a proposed modification “render[s] the prior art unsatisfactory for its intended purpose” or when the proposed modification “change[s] the principle of operation of a reference.” See M.P.E.P. § 2145 (X)(D). If *Feig* is combined with *Chayes*, as the Office proposes, then *Feig*’s principle of operation must be drastically changed. Indeed, significant portions of *Feig*’s teachings must be **eliminated**. The proposed combination of *Feig* with *Chayes* cannot support a *prima facie* case for obviousness, so the Office is required to remove the § 103 (a) rejections of the pending claims.

*Feig*’s principle of operation is first explained. *Feig* strips individual frames from a multimedia file and then packetizes the frames. See U.S. Patent Application Publication 2006/0041679 to Feig at paragraph [0040]. As *Feig* explains, a “multimedia file having groups of data is stored in an application server.” *Id.* at paragraph [0040]. “**Each group ... corresponds to a single video frame.**” *Id.* (emphasis added). The “application server buffers the stripped groups [*e.g.*, frames] in a staging buffer.” See *id.* at paragraph [0042]. The “application server transfers ... the consecutive groups [*e.g.*, frames] ... to a streaming server.” *Id.* “[T]he streaming server converts the consecutive groups [*e.g.*, frames] into a standard streaming format,” such as the TCP protocol. *Id.* “[T]he streaming server sends the converted groups [*e.g.*, streaming, formatted frames] to the client apparatus.” *Id.* See also paragraphs [0050], [0055], and [0058].

*Chayes'* principle of operation is next explained. *Chayes'* principle of operation is to generate "a weighted cluster graph of newsgroups utilizing cross-posting information." U.S. Patent Application Publication 2004/0267686 to *Chayes, et al.* at paragraph [0044]. *Chayes* first explains that "newsgroup data" is received. *Id.* at paragraph [0044]. Although the newsgroup data can be "formatted in any suitable manner," *id.* at [0044], *Chayes* only teaches receiving the "newsgroup data" as "matrices and arrays." *Id.* at paragraphs [0045], [0046], and [0058] – [0060]. A "weighted graph" is then generated, "which depicts relatedness of two or more newsgroups." *Id.* at paragraph [0048]. The "newsgroups [are] represented as vertices and [the] cross-posts [are] represented as edges." *Id.* at paragraph [0063]. The weighted graph is then "recursively segmented into clusters" of highly related newsgroups using a clustering algorithm (such as "spectral clustering algorithms"). *Id.* at paragraph [0066]. *See also* U.S. Patent Application Publication 2004/0267686 to *Chayes, et al.* at paragraphs [0052] and [0053]. After segmentation, clusters are merged if substantially related to one another. *See id.* at paragraph [0067].

***Chayes* explains that "recursive segmentation" of the weighted graph is determined using eigenvectors.** *See id.* at paragraphs [0075] and [0078] (emphasis added). "Prior to performing any segmentation, a segmentation value is defined and vertices of a weighted graph are divided into at least two segments." *Id.* at paragraph [0079]. Eigenvectors are computed and an "Mcut ratio" is computed. *Id.* at paragraphs [0081] and [0082]. The "Mcut ratio" is compared to a threshold for determining cluster sizes. *Id.* at paragraphs [0083] through [0086].

The Board must now realize that "impermissible changes" are required. If *Feig* is combined with *Chayes*, as Examiner Tran proposes, then *Feig's* principle of operation must be impermissibly changed. For example, because *Chayes* only teaches receiving "newsgroup data" as "matrices and arrays," *Feig's* principle of operation must be changed to receive a matrix of newsgroup information and to somehow "strip" video frames from the matrix. Indeed, *Feig's* entire teaching of receiving a "multimedia file having groups of data," with each group corresponding to a "single video frame," must be eliminated.

Even more changes are required. Because *Feig* strips video frames from a multimedia file, *Feig*'s principle of operation must be impermissibly changed to generate a "weighted graph" from these stripped video frames, as *Chayes* teaches. This weighted graph would have to depict relatedness of two or more "stripped frames," such that the stripped frames are "represented as vertices and [the] cross-posts [are] represented as edges." See *Chayes*, at paragraph [0063]. Clearly, as video frames do not contain "cross-posts" (as newsgroups supposedly would), *Feig*'s principle of operation must be changed to process this non-existent information. Moreover, *Feig*'s principle of operation must also be impermissibly changed to segment the hypothetical weighted graph of "stripped frames" into "clusters" using a clustering algorithm. See *Chayes*, at paragraph [0066]. Somehow *Feig*'s principle of operation must also be impermissibly changed to compute eigenvalues on non-existent information, determine an "McCut ratio" using non-existent information, and then compare to a threshold, all as *Chayes* teaches.

The proposed combination of *Feig* with *Chayes* thus teaches away. If *Feig* is combined with *Chayes*, as the Office proposes, then *Feig*'s principle of operation must be drastically changed. Indeed, significant portions of *Feig*'s teachings must be **eliminated**. The patent laws, however, forbid changing a principle of operation to support a *prima facie* case.

The Board is respectfully requested to REMOVE the § 103 rejection of claims 1-20 based on any proposed combination of *Feig* with *Chayes*.

**2. Because *Feig* with *Chayes* Teaches Away, the Pending Claims Cannot Be Obvious**

Claims 1-20 were finally rejected under 35 U.S.C. § 103 (a) as being obvious over U.S. Patent Application Publication 2006/0041679 to *Feig* in view of U.S. Patent Application Publication 2005/0094725 to Hui and further in view of U.S. Patent Application Publication 2004/0267686 to *Chayes, et al.*

Because *Feig* with *Chayes* teaches away, though, the Board is respectfully requested to REMOVE the § 103 rejection of claims 1-20.

## **CONCLUSION**

In view of the foregoing reasons, the Appellant respectfully requests removal of the § 103 (a) rejection of claims 1-20.

## **AUTHORIZATION FOR PAYMENT OF FEES**

If there are any other fees due in connection with the filing of this brief in support of appeal, please charge the fees to the credit card identified in the Credit Card Payment Form submitted herewith. If any additional fees are required, such as a fee for an extension of time under 37 C.F.R. § 1.136, such extension of time is requested and the fee should also be charged to the credit card on file.

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If any issues remain outstanding, the Office is requested to contact the undersigned at (919) 469-2629 or [scott@scottzimmerman.com](mailto:scott@scottzimmerman.com).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Scott P. Zimmerman', with a stylized flourish at the end.

Scott P. Zimmerman  
Attorney for the Assignee/Appellant  
Reg. No. 41,390

## **CLAIMS APPENDIX**

### U.S. Patent Application No. 10/720,941 Pending Claims

[c01] A method of providing communications services, comprising:

receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

dispersing the segments via a network for subsequent processing services;

receiving results of the processing services;

aggregating the results of the processing services into a second data stream; and

communicating the second data stream via the network.

[c02] A method according to claim 1, further comprising receiving a request for the first data stream, the request originating from a client communications device.

[c03] A method of providing communications services, comprising:

receiving data at a computer, the data received as packets of data packetized according to a packet protocol;

segmenting the packets of data into segments according to a segmentation profile stored in memory;

dispersing at least one of the segments via a network for a subsequent processing service;

receiving results of the subsequent processing service;

aggregating the results of the subsequent processing service; and

communicating the aggregated results to a client communications device, wherein the aggregated results are formatted according to the segmentation profile.

- [c04] A method according to claim 3, further comprising processing at least one of the segments at a network device operating in the communications network.
- [c05] A method according to claim 3, wherein dispersing the segments comprises dispersing according to the segmentation profile.
- [c06] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a template, the template describing a repetitive structure of the packets of data.
- [c07] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a dynamic requirement.
- [c08] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a network performance requirement.
- [c09] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to availability of routing within the communications network.
- [c10] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to availability of the subsequent processing service.
- [c11] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a network location of the subsequent processing service.
- [c12] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a characteristic of the client communications device.

- [c13] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a security requirement.
- [c14] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a privacy requirement.
- [c15] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a Service Level Agreement.
- [c16] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a subscriber's schedule.
- [c17] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to a subscriber's presence.
- [c18] A method according to claim 3, wherein segmenting the packets of data comprises segmenting according to communications network resources of which a subscriber may access.
- [c19] A system, comprising:

means for receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

means for recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

means for dispersing the segments via a network for subsequent processing services;

means for receiving results of the processing services;

means for aggregating the results of the processing services into a second data stream; and

means for communicating the second data stream via the network.

[c20] A computer program product comprising processor executable instructions for performing a method, the method comprising:

receiving a first data stream at a computer, the first data stream comprising packets of data packetized according to a packet protocol;

recursively segmenting the first data stream into segments, such that a characteristic of a preceding segment determines how a current segment is segmented;

dispersing the segments via a network for subsequent processing services;

receiving results of the processing services;

aggregating the results of the processing services into a second data stream; and

communicating the second data stream via the network.



### **EVIDENCE APPENDIX**

There are no submissions pursuant to 37 CFR § 41.37 (c) (ix) for U.S. Patent Application No. 10/720,941.

### **RELATED PROCEEDINGS APPENDIX**

There are no submissions pursuant to 37 CFR § 41.37 (c) (x) for U.S. Patent Application No. 10/720,941.